

## REMARKS/ARGUMENTS

This application has been carefully considered in light of the non-final office action mailed September 19, 2006. In the office action Claims 1-7, 9-15 have been rejected as being directly anticipated under 35 U.S.C. 102(b) by the reference to Matoba, US Patent 5,355,562. Claims 21-24 have been rejected as being obvious under 35 U.S.C. 102(b) over Lohr, US Patent 3,605,210. Claim 8 has been rejected as being obvious under 35 U.S.C. 103(a) over Van Riesen, US Patent 4,809,409. Claims 16 and 18 have been rejected as being obvious over a combination of the teachings of the primary reference to Matoba when further considered with the teachings of the reference to Clarke, US Patent 2,153,077.

Claims 1 and 21 have also been provisionally rejected under the doctrine of obviousness-type double patenting over co-pending application 10/669,381.

Claims 17, 19 and 20 have only been objected to as being dependent from rejected base claims but would be allowed if amended to include the limitations of the base claims and any intervening claims. For the reasons set forth below, reconsideration of the art rejections and the obviousness-type

double patenting rejection is requested.

In view of the amend to the claims, claims 1, 4-6, 8, 10-14, 17, 19-21 and 23 remain pending with claims 2, 3, 7, 9, 15, 16, 18, 22 and 24 being canceled without prejudice.

The present invention is directed to a buckle for use with a vehicle belt restraint system wherein a latch plate associated with the harness belt can not be accidentally released from the buckle due to inertial forces or other forces applied to any portion of the buckle due to vehicular accident. In this respect, the present invention includes two latching mechanisms which are disposed in opposing relationship and each of which is urged to first outer locking positions by a resilient element which applies a generally equal amount of force to each of the locking mechanisms. As set forth in claim 1, the latching mechanisms are slidable transversely in guide channels with respect to a longitudinal central axis of the buckle and are disposed such that any force applied to either latching mechanisms to urge it to a second release position applies a generally equal and opposite force to the opposing latch mechanism to urge it to be retained in its first locked position with respect to the latch plate, thus assuring that the latch plate can not be accidentally displaced. Utilizing the teachings

of the present invention, manual force is applied simultaneously to each of the latching mechanisms in order to simultaneously move them to their second release positions in order to remove the latch plate from the buckle housing by manually moving a release member that simultaneously engages both latching mechanisms. Further, with the present invention, an inertial safety lock is provided that is movable independently of the manual release member and which is movable to a position to prevent the latching mechanisms from being moved to their second release positions by a non-manual force, such as an inertial force, applied longitudinally of the buckle housing, that would otherwise cause the manual release member to move in a direction to urge the latching mechanisms to their release positions. These unique operative characteristics can not be found in the cited references.

The reference to Matoba et al teaches placing a U-shaped spring element 26 having opposite legs 26a and 26b that normally urge latching members 18 into a first locked engagement with the tongs of a latch plate. Unlike the structure of the present invention wherein when a force is applied to urge one of the latching mechanisms to a second opened position by an equal and opposite force applied to the opposite latching mechanism, in Matoba et al, the spring legs are independent of one another such

that a force to urge one of the latching mechanisms to an open position does not result in any substantially equal an opposite force being applied to the opposite latching mechanism. Such transfer of force is prevented by the member 36 of the latch plate. Any amount of force that would be transferred to the opposite latching mechanism would necessarily be limited by the lateral shifting of the latch plate within the buckle housing and this would be very little due to the need to stabilize the latch plate within the buckle housing when locked therein. In addition, there is no teaching of providing an independently movable lock that is effective upon an application of a non-manual force that would tend to drive the latching mechanism release member to it's second release position to block movement of the latching mechanisms to their second release positions. The projection 36 in the reference would not perform the same function as there is no release member that would move longitudinally of the buckle by a non-manual force. Rather, the projection is provided to facilitate the ejection of the latch plate by the force applied thereto by the legs of the spring 26.

The Examiner has indicated that the projection 36 of Matoba et al does not disclose the inertial lock as set forth in claims 16 and 18 of the present application and in this respect has cited the teachings of Clarke. The Examiner is citing element 19

of Clarke as being a lock to prevent the pair of latching mechanisms 3 from being moved toward one another when a non-manual force is applied longitudinally of the buckle to permit an unlocking of the latch plate. The element 19 does engage with the latching mechanisms but does so whenever the latching mechanisms are in their locked position. With the present invention, the overall claimed structure is different in that a longitudinally movable release member is used to manually move the latching mechanisms inwardly to their unlocked position. Because of this structure, the invention provides a lock that only prevents movement of the latching mechanisms to their release positions when a non-manual force is applied that would tend to drive the release member to a position that would urge the latching mechanisms to their release positions, otherwise, the lock is spaced from the latching mechanisms so that they may be manual moved when it is desired to release the latch plate. In view of the foregoing, the overall operative structure set forth in claims 16 and 18 is not taught nor disclosed in Clarke. Further, it would not be possible to combine the structure of Clarke with that of Matoba et al as the entire structure of Matoba et al would have to be modified as Matoba et al uses a pair of spaced latch plate tongs 14 to cooperate with latching mechanisms 18 as opposed to the single latch plate projection 17 of Clarke. Any type of locking element such as the member 19 of

Clarke to engage the latching mechanisms of Matoba et al would prevent the proper manual opening of the latching mechanisms described therein.

The secondary teachings of the reference to Van Reisen have been considered, however, the modification of the housing in Matoba et al to create a domed structure would not overcome the differences discussed above between the present invention and the teachings of Matoba et al. Therefore, reconsideration of the combination rejection for obviousness is respectfully solicited.

The reference to Lohr discloses latching mechanisms 40, 42 which are pivotally mounted within a buckle and which include large mass portions extending outwardly from the pivot and on an opposite side of their pivot mountings from the latch engaging portions. The body portions engage a push-button release member such that each latch mechanism is at all times coupled to the release member. This coupling engagement is shown by the extensions 70 and 72 of the release member which fit into slots 74 and 76 in the enlarged body portion of each latch mechanism as clearly shown in Fig. 3 of the reference.

Because of the manner in which the latch mechanisms 40 and 42 of the reference to Lohr are mounted within the buckle and

coupled with the side release member 64, the latch plate 14 may be easily ejected from the buckle by inertial forces applied either generally along the elongated axis of the buckle or by forces applied transversely with respect to the elongated axis. If an outside force is applied to the end frame 20 of the buckle, the force will cause the massive portion of the latching mechanisms and the slide release member 64 to move relative to one another due to the relationship between the projections 70, 72 and the slots 74 and 76 in the latch mechanisms. The latch mechanism 42 would be pivoted counterclockwise to the dotted position shown in drawing Fig. 3 and latch mechanism 42 would be pivoted to the dotted line position also shown in Fig. 3 whereby the hooked end portions would allow the latch plate 14 to be released.

In the event force is applied transversely of the buckle, the force would direct the latch mechanism 40 to be more securely engaged in the full line position shown in Fig. 3, however, the same force would cause the opposite latching mechanism 42 to be moved counterclockwise to the dotted line position, and because of the coupling between the latching mechanism 42 and the slide member 64, the slide member would be pushed toward a release position thereby pivoting the latch mechanism 40 to a release position shown in dotted line and allowing the latch plate 14 to

become disengaged from the buckle.

The foregoing scenarios are possible because of the pivot mounting of the latch mechanisms within the buckle of the reference to Lohr and also because of the massive body portion of each latch mechanism which is on the opposite side of the pivot axis from the latch hooks. Further, the body portions are also slidably engaged with the release member 64.

With applicant's invention as defined in the embodiment of Figs. 28 and 29 wherein a single slide release member is utilized, the slide release member is not coupled or connected to the latch mechanisms. If a force is applied along the length of the longitudinal axis of the buckle of the present invention, the slide release member will be pushed inwardly, however, the independently movable lock 220 is forced intermediate the latch mechanisms thereby preventing the latch mechanisms from being moved to their second release positions. In addition, the lock is normally retained in its first or outer position by at least one spring element 230.

Further, if a force is applied transversely to the buckle of the present invention, the adjacent latch mechanism may be moved towards a second release position, however, during such movement,



a force is applied by the interconnecting resilient or spring element to the opposing latch mechanism applying an equal and opposite force to retain the opposite latch mechanism in its first locked position thus preventing an accidental withdrawal of the latch plate from the buckle housing.

In view of the foregoing, it is respectfully submitted that the references to Mitoba et al, Lohr, Van Riesen and Clarke also do not teach the method of amended claim 21 wherein an inertial lock is movable to block the movement of the latching mechanisms to their release positions, independently of the movement of the manual release member, whenever a non-manual force is applied which causes the manual release member to be urged to its second release position. Such a method of moving an inertial lock to prevent an unlocking of the latching mechanism is not suggested.

In view of the provisional rejection for double patenting, a terminal disclaimer and the required fees are submitted herewith.

In view of the foregoing, reconsideration of the grounds for rejection of the claims and allowance of claims 1, 4-6, 8, 10-14, 17, 19-21 and 23 is respectfully solicited.

An earnest effort has been made to place this application in condition for allowance which action is requested. Should the Examiner have any questions concerning the amendment submitted herewith or the allowability of the claims with respect to the prior art, it would be appreciated if the Examiner would contact the undersigned attorney-of-record for purposes of scheduling a personal interview for further facilitating the prosecution of the application. It is further requested that the interview be granted before taking any action which may be considered final.

Respectfully submitted,

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